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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,011	12/02/2003	Sang-Bae Kim	P-0618	3178

34610 7590 07/27/2005

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EXAMINER

JIANG, CHEN WEN

ART UNIT PAPER NUMBER

3744

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,011	KIM ET AL.	
	Examiner	Art Unit	
	Chen-Wen Jiang	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-12 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Fig. 7 in the reply filed on 4/29/2005 is acknowledged. The traversal is on the ground(s) that Figs. 8-9 show a washing means for variable temperature storage area shown in Figs. 7, 10, 11 and 12. This is found persuasive; therefore, claims 1-21 are examined in this Office Action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 3, 7, 8, 9, 10, 11, 16, 17 and 18 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zentner et al. (U.S. Patent Number 6,802,369).

In regard to claims 1, 2, 3, 7, 8, 9, 11, 16, 17 and 18, Zentner et al. disclose a refrigerator having quick chill and thaw control method and apparatus. Referring to Figs. 1 and 4-7, the refrigerator comprises a variable temperature storage chamber 122, a heating room 254, a heating means 270, a first path inflow thru damper 260, 302 from freezer into chamber 122, a second path thru heating element 270-damper 266 (check valve)-chamber 122-heating area 254, temperature sensors in the re-circulation path 256 and/or return path 254, fan 274, 306 and dampers 260, 266. The dampers 266, 312 control the third and fourth flow paths.

In regard to claim 10, heater element 270 is a foil-type heater element that is cycled on and off and controlled to achieve optimal temperatures for refrigerated thawing independent from a temperature of fresh food compartment 102. In other embodiments, other known heater elements are used in lieu of foil type heater element 270.

4. Claims 1,2,3,8,9,10,11,16,19,20 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Frohbieter (U.S. Patent Number 4,732,009).

Frohbieter discloses a refrigerator compartment for accurately controlled temperature. Referring to Figs. 1, 2 and 7-9, the refrigerator comprises a refrigerator compartment 14, a freezer compartment 18 and a temperature-controlled compartment 28. Referring to Fig. 3, a heater 76 is mounted within the chamber 42 and controlled by the control circuit 66 to warm the air that was drawn into the chamber 42 by the fan 36 should the temperature within the temperature controlled compartment 28 fall below the predetermined set temperature. The fan runs nearly continuously, either at varying speeds or on a rapid duty cycle. The refrigerator further comprises a cool air inlet duct 106 from the freezer compartment 104 to the temperature controlled compartment 100, cool air outlet duct 110 return to the freezer compartment, temperature sensor 68 and a fan 36. Referring to Fig. 3, the controlled temperature compartment 28 is partially enclosed by insulated walls 58 of the cabinet 12, including a lower insulated wall 60 between the compartment 28 and the refrigerator 14. The door 30 completes the enclosure and is mounted to the lower wall 60 by a hinge 62.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zentner et al. (U.S. Patent Number 6,802,369) in view of Tokui et al. (JP 06265291).

Zentner et al. disclose the invention substantially as claimed. However, Zentner et al. do not disclose ultrasonic defrosting. Tokui et al. disclose an ultrasonic defrosting in the same field of endeavor for the purpose of defrost. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Zentner et al. with an ultrasonic device in view of Tokui et al. so as to defrost.

Allowable Subject Matter

7. Claims 4-6 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, appearing to be 'C. Jiang', written over a horizontal line.